

Barcoded Nanoparticles for Personalized Drug Screening in Cancer Patients

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Over 1.6M new cancer cases are diagnosed in the US each year. Based on current literature, one of three patients does not receive the optimal treatment he or she deserves. Today, once a tumor is diagnosed, choice of treatment based on clinical signs manifested in similar cancer cases which result in trial and error of multiple chemotherapy regimens. Beyond the loss of valuable time and suffering for each patient, the financial burden of the wrong treatment choice accounts for more than \$10B in direct costs annually in the US alone. To overcome this huge unmet need, emerging sequence-based treatments offer a new hope for patients, yet these technologies still lack in their ability to predict the optimal treatment choice for each patient.

Barcode Diagnostics offers a unique approach for cancer drug-screening. Our technology measures the therapeutic efficacy of different cancer drugs simultaneously on the tumor *in-situ*. The screening method is based on encapsulation of chemotherapeutic drugs in liposome nanoparticles together with corresponding DNA barcodes as identifiers. A mixture of these encapsulated drugs is injected into the bloodstream, reaches the tumor and rapidly provides information on the potency of each chemotherapy within the patient's body.

Our aim is to provide oncologists with a new tool that matches each patient with the most potent and suitable medicine, during the different stages of the disease, for the optimization of cancer care.

Barcode Diagnostics is part of NGT³ VC. With an exclusive technology license from the Technion, the company is actively seeking collaborative opportunities and investments.